

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A flow spreading mechanism comprising:
at least one inlet through which a fluid flow is introduced;
a flow separating means for separating the fluid flow introduced through the at least one inlet into at least two fluid flows; and
an outlet for discharging at least two of the at least two fluid flows to an outside of the flow spreading mechanism, said at least two fluid flows being divided by the flow separating means and joined together at a joining point thereafter,
wherein the outlet is located adjacent to the joining point where the at least two fluid flows are joined together such that the fluid flow being discharged through the outlet swings while proceeding due to complex vortices caused by the at least two fluid flows being joined together at the joining point and so the fluid flow being discharged through the outlet is discharged to a wider space than a width of the outlet.
2. (Original) The flow spreading mechanism of claim 1, wherein the flow separating means comprises a plurality of conduits for providing the flow introduced from the inlet with flow paths.
3. (Previously Presented) The flow spreading mechanism of claim 2, wherein a number of the inlets is the same as that of the conduits, and each inlet corresponds to each conduit.
4. (Original) The flow spreading mechanism of claim 2, wherein the flow separating means comprises two conduits.
5. (Previously Presented) The flow spreading mechanism of claim 1, wherein the flow separating means comprises:
a conduit to form a flow path between the inlet and the outlet; and

a blunt body placed inside the conduit to form two separated flow paths inside the conduit.

6. (Original) The flow spreading mechanism of claim 5, wherein the two separated flow paths are formed extending in a part of the conduit.

7. (Canceled).

8. (Previously Presented) The flow spreading mechanism of claim 6, wherein the blunt body is a plate which is substantially perpendicular to a direction of the flow path inside the conduit.

9. (Previously Presented) The flow spreading mechanism of claim 6, wherein the blunt body is columnar with its longitudinal axis substantially perpendicular to a direction of the flow path inside the conduit.

10. (Previously Presented) The flow spreading mechanism of claim 6, wherein ends of the conduit on a side of the outlet are symmetrically bent toward a center of the conduit so that a width of the outlet is smaller than a width of the conduit.

11. (Previously Presented) The flow spreading mechanism of claim 10, wherein the blunt body is a plate which is substantially perpendicular to a direction of the flow path inside the conduit, and a width of which is uniform.

12. (Currently Amended) A flow spreading mechanism comprising:
at least one inlet through which a fluid flow is introduced;
a flow separating means for separating the fluid flow introduced through the at least one inlet into at least two fluid flows; and

an outlet for discharging at least two of the at least two fluid flows to an outside of the flow spreading ~~mechanism~~mechanism, the at least two fluid flows being divided by the flow separating means and joined together thereafter,

wherein complex vortices are formed adjacent to the outlet and thus, the fluid flow being discharged through the outlet swings while proceeding and so the fluid flow being discharged through the outlet is discharged to a wider space than a width of the outlet,

wherein the flow separating means comprises:

a conduit to form a flow path between the inlet and the outlet; and

a blunt body placed inside the conduit to form two separated flow paths inside the conduit,

wherein the two separated flow paths are formed extending in a part of the conduit,

wherein ends of the conduit on a side of the outlet are symmetrically bent toward a center of the conduit so that a width of the outlet is smaller than a width of the conduit, and

wherein an interval between the plate and the outlet is set smaller than the width of the outlet such that the flow path from both sides of the plate to the outlet functions as nozzles.

13. (Original) The flow spreading mechanism of claim 11, wherein the plate and the outlet have the same width, and the inlet has the same width as the width of the plate and the outlet.

14. (Previously Presented) The flow spreading mechanism of claim 13, wherein a length of a portion of the conduit having a different width from the width of the inlet is 1 to 1.5 times the width of the inlet, and the width of the portion is 2 to 2.5 times the width of the inlet.

15. (Previously Presented) The flow spreading mechanism of claim 14, wherein an interval between the plate and the outlet is about 0.5 times the width of the outlet.

16. (Previously Presented) The flow spreading mechanism of claim 1, wherein the outlet is installed in a space, and

wherein the flow spreading mechanism further comprises at least one sink installed at a predetermined location inside the space, the sink comprising an opening for discharging fluid inside the space to the outside.

17. (Previously Presented) The flow spreading mechanism of claim 16, wherein a number of the at least one sink is even-numbered, and each pair of the sinks are installed to face each other in a line traverse to a movement direction of the flow discharged through the outlet.

18. (Currently Amended) A flow spreading mechanism comprising:

at least one inlet through which a fluid flow is introduced;

a flow separating means for separating the fluid flow introduced through the at least one inlet into at least two fluid flows; and

an outlet for discharging at least two of the at least two fluid flows, which are divided by the flow separating means and joined together thereafter,

wherein complex vortices are formed adjacent to the outlet and thus, the fluid flow being discharged through the outlet swings while proceeding,

wherein the flow separating means comprises:

a conduit to form a flow path between the inlet and the outlet; and

a blunt body placed inside the conduit to form two separated flow paths inside the conduit,

wherein the two separated flow paths are formed extending in a part of the conduit,

wherein the two separated flow paths are formed adjacent to the outlet in the conduit,

wherein ends of the conduit on a side of the outlet are symmetrically bent toward a center of the conduit so that a width of the outlet is smaller than a width of the conduit,

wherein the blunt body is a plate which is substantially perpendicular to a direction of the flow path inside the conduit, and a width of which is uniform,

wherein the plate and the outlet have the same width, and the inlet has the same width as the width of the plate and the outlet,

wherein the outlet is installed in a space, and

wherein the flow spreading mechanism further comprises at least one sink installed at a predetermined location inside the space, the sink including an opening for discharging fluid inside the space to the outside and having a same width as the width of the plate.

19. (Previously Presented) A heat exchanger comprising a flow spreading mechanism as claimed in claim 1.

20. (Previously Presented) A refrigerator comprising a flow spreading mechanism as claimed in claim 1.

21. (Previously Presented) An air conditioner comprising a flow spreading mechanism as claimed in claim 1.

22. (Currently Amended) A flow spreading mechanism comprising:
a conduit having an inlet and an outlet; and
a blunt body placed inside the conduit and configured to break an inlet fluid flow coming from the inlet into at least two separate fluid flows and then join the at least two separate fluid flows at a joining point thereafter into a discharge fluid flow discharged through the outlet,

wherein the outlet of the conduit is located adjacent to the joining point where the at least two fluid flows are joined together such that the discharged fluid flow being discharged through the outlet swings while proceeding due to complex vortices caused by the at least two fluid flows being joined together at the joining point,

wherein ends of the conduit on a side of the outlet are symmetrically bent toward a center of the conduit so that a width of the outlet is smaller than a width of the conduit,

wherein a width of the outlet is less than a width of the blunt body,

wherein a width of the inlet is less than a width of the conduit such that an inlet neck portion is formed, and

wherein a width of the inlet neck portion is less than a width of the blunt body and a width of the outlet.

23. (Currently Amended) The flow spreading mechanism of claim 22, wherein the blunt body comprises at least one from:

a plate installed substantially perpendicular to a direction of the inlet fluid flow inside the conduit, a rectangular-shaped body, a diamond-shaped body, a triangular-shaped body, a semi-circle-shaped body, a circle-shaped body, and an oval-shaped body.

24-25. (Canceled)

26. (Previously Presented) The flow spreading mechanism of claim 23, wherein a distance between the blunt body and the outlet is smaller than a width of the outlet.